

SEQUENCE LISTING

SEQ ID NO:1

human CNG2B amino acid sequence

- 5 MSQDTKVKTTESPPAPSKARKLLPVLDPGSDYYYWNLNTMVFPVMYNIILVCRACFPDLQHGVLVAWLVL
DYTSDLLYLDMVVRFTHTGFLEQGIIVVDKGRISSRYVRTWSFFLDLASLMPTDVVYVRLGPHTPLRLNRF
LRAPRLF EAFDRTETRTAYPNAPRIAKMLYIFVVIHWNSSCLYFALSRYLGFGRDAWVYDPDAQPGFRLRR
QYLYSFYFSTLILTTVGDTPPPAREEBEYLFMVGDFLLAVMGFATIMGSMSSVIYNMNTADAAFPDHALVKK
YMKLQHVNRKLRERRVIDWYQHLQINKKMTNEVAILQHLPERLRAEVAVSVHLSTLSRVQIPQNCESALLEEL
10 VLKLQPPQTYSPGEYVCRKGDIGQEMYIIREGQLAVADDGITQYAVLGAGLYFGEISIIINIKGNMSGNRRRTA
NIKSLGYSDLFLCKEDLREVLSEYPQAQTIMEKGREILLKMNKLDVNAABAEIALQEATESRLRGLDQQL
DDLQTKFARLLAELESSALKIAYRIERLEWQTREWMPMPEDLAEADDEGEPEBGTSKDEEGRASQEGPPGPE

SEQ ID NO:2

- 15 complete human CNG2B nucleotide sequence

- AGAGGGGAGGAGGAAAAACAGAGACAGACTCAGGCTTCCCTCTGAGGCATGCACCCACCTTCTCCAGGGA
TCTCATTAGAGGTGTTTAGCTGGGCAGGTGTAAGCCACGGCCCTGGGAGACAGGGCAGAGTGCTAGAGCTAG
ACTGTCTCCACCCCTTCAGTAGCGCTAGCTCTGGTTGTGTGTGCTAAGAGCCCAAGAGCAAGAAGTCACAG
20 CAGAAGCCCAACAGCAGCCTCCTTCAGACAGTCAGGCAGTGTGCCCACTCCAGAACTCCCTACAGGCAG
AGAGGGTGTGGACATCTCACACCCAGCACCAGACACAGAACCAGAGCAGGACACCAAGATGAAGACAA
CAGAGTCCAGTCCCCAGCCCCATCCAAGGCCAGGAAGTTGCTGCCTGTCTGGAGCCATCTGGGGATTACT
ACTACTGGTGGCTGAACAATAGTCTTCCAGTCATGTATAACCTCATCATCTCGTGTGCAGAGCGCTGCT
TCCCCGACTTGCAGCAGCGTTATCTGTGTGGCCTGGTTGGTGTGCTGGACTACACGAGTGACCTGCTATACCTAC
25 TAGACATGGTGGTGCCTTCCACACAGGATTCTTGGAACAGGGCATCTCTGGTGGTGGACAGGGTAGGATCT
CGAGTCGCTGCGCTGCACCTCGAGGTTCTTCTGTGACCTGGCTTCCCTGATGCCACAGATGTGGTCTACG
TGGCGCTGGGCCCGCACACACCAACCTGAGGCTGAACCGCTTCTCCCGCGCGCCCGCTCTTCGAGGCCT
TCGACCGCACAGAGACCCGCACAGCTTACCCAAATGCCTTTCGATTGCCAAGCTGATGCTTTACATTTTGT
TCGTATCCATTGGAACAGCTGCTATACCTTGGCCCTATCCCGGTACCTGGGCTTCGGGCGTGACGATGGG
30 TGTAACCGGACCCCGCGCAGCCTGGCTTTGAGCGCCTGCGGCGCCAGTACCTCTATAGCTTTTACTTCTCCA
CGCTGATCTGACTACAGTGGGCGATACACCGCCGCCAGCAGGGAAGAAGTAGTACCTCTTCATGGTGGCG
ACTTCTCTGCTGGCCGTATGGGTTTCGCCACCATCATGGGTAGCATGAGCTCTGTCTATCAACATGAACA
CTGCAGATGCGGCTTCTACCCAGATCATGCACTGGTGAAGAAGTACATGAAGCTGCAGCAGCTCAACCGCA
AGCTGGAGCGCGAGTTATTGACTGGTATCAGCACCTGCAGATCAACAAGAAGATGACCAACAGGATAGCCA
35 TCTTACAGCACTTGCTGAGCGGCTGCGGGCAGAAGTGGCTGTGTGTGTGTGACCTGTGCCACTGTGACCTGTG
TGCAGATCTTTCAGAACTGTGAGGCCAGCCTGTCTGGAGGAGCTGGTGTGTAAGCTGCAGCCCCAGACCTACT
CCGTGGTGGCAGATGATGGTATCACACAGTATGCTGTGTGTGCGGTGAGGCTCTACTTTTGGGGAGATCAGCA
TCATCAACATCAAGGGAACATGTCTGGGAACCGCGCACAGCCAAACATCAAGAGCTAGGTTATTTCAGACC

TATTCTGCCTGAGCAAGGAGGACCTGCGGAGGTGCTGAGCGAGTATCCACAAGCACAGACCATCATGGAGG
 AGAAAGGACGTGAGATCCTGCTGAAAATGAACAAGTTGGACGTGAATGCTGAGGCAGCTGAGATCGCCCTGC
 AGGAGGCCACAGAGTCCCCTGCTACGAGGCTAGACCAGCAGCTGGATGATCTACAGACCAAGTTTGCTCGCC
 TCCTGGCTGAGCTGGAGTCCAGCGCACTTAAGATTGCTTACCGCATTTGAACGGCTGGAGTGGCAGACTCGAG
 5 AGTGGCCAATGCCCGAGGACCTGGCTGAGGCTGATGACGAGGGTGAGCCTGAGGAGGGAACTTCCAAGATG
 AAGAGGGCAGGGCAGCCAGGAGGGACCCCAAGTCCAGAGTGACCCCATCCCCATCCCCAGGATTCCACC
 TCCTAGTGAATCCAGAGTTGTAGTAAAGCCTAAGTCTGCAACTCTGTCTATCCTGTCTGCGAGATCACAGAC
 ACAGGAGCGAATTGGTCTGTAGATGCCAGCTAGAGATATAGAGTTTAAACGCACATTACGCCCCCACTTAC
 CAGTACACACACACACACACACACATTTGCTCATAGACCTGTTGGCCCCAAGACTGTGCATTCCAT
 10 CTAA

SEQ ID NO:3

human CNG2B coding sequence

15 ATGAGCCAGGACACCAAGTGAAGACAACAGAGTCCAGTCCCCAGCCCCATCAAGGCCAGGAAGTTGCTG
 CCTGCTCTGGACCATCTGGGGATTACTACTACTGGTGGCTGAACACAATGGTCTTCCAGTCATGTATAAC
 CTCATCATCCTCTGTGTGACAGACCTGCTTCCCCGACTTGCAGCACGGTTATCTGGTGGCTGGTGTGGTCTG
 GACTACACGAGTGACCTGCTATACCTACTAGACATGGTGGTGCCTTCCACACAGGATTCTTGGAAACAGGGC
 ATCCTGGTGTGGACAAGGGTAGGATCTCGAGTCGCTACGTTCCGACCTGGAGTTTCTTCTTGGACCTGGCT
 20 TCCTGATGCCACAGATGTGTCTACGTGCGGTGGGCCCCACACACCCACCTTGAGGCTGAACCGCTTT
 CTCGCGCGCCCCGCTCTTCGAGGCCTTCGACCGCACAGAGACCCGCAAGCTTACCCAAATGCTTTTCGC
 ATTGCCAAGCTGATGCTTTACATTTTGTGCTCATCCATTGGAACAGCTGCCTATACTTTGCCCTATCCCG
 TACCTGGGCTTCGGGCGTGACGCATGGGTGTACCCGGACCCCGCGACCTGGCTTTGAGCGCTGCGGCGC
 CAGTACCTCTATAGCTTTTACTTCTCCACGCTGATAGTACTACAGTGGGCGATACACCGCGCCAGCCAGG
 25 GAAGAAGATACCTCTTATGTTGGGCGACTTCCTGCTGGCCGTCATGGGTTTCCGCCACCATCATGGGTAGC
 ATGAGCTCTGTCTATACAACATGAACACTGCAGATGCGGCTTCTACCCAGATCATGCACTGGTGAAGAG
 TACATGAAGCTGCAGACGCTCAACCGCAAGCTGGAGCGCGAGTTATTGACTGGTATCAGCACCTGCAGATC
 AACAGAAGATGACCAACGAGGTAGCCATCTTACAGCACTTGCTGAGCGGTGCGGGCAGAAGTGGCTGTG
 TCTGTGCACCTGTCCACTCTGAGCCGGGTGCAGATCTTTCAGAACTGTGAGGCCAGCCTGTGGAGGAGCTG
 30 GTGCTGAAGCTGCAGCCCCAGACCTACTCACCAGGTGAATATGTATGCCGCAAGAGAGACATTGGCCAAAG
 ATGTACATCATCCGAGAGGGTCAACTGGCCGTGGTGGCAGATGATGGTATCACACAGTATGCTGTGCTCGGT
 GCAGGGCTCTACTTTGGGGAGATCAGCATCATCAACATCAAAGGGAACATGTCTGGGAACCGCGCACAGCC
 AACATCAAGAGCTAGGTTATTTCAGACCTATTCTGCTGAGCAAGGAGGACCTGCGGGAGGTGTGAGCGGAG
 TATCCACAAGCACAGACCATCATGGAGGAGAAAGGACGTGAGATCCTGCTGAAAATGAACAAGTTGGACGTG
 35 AATGCTGAGGCAGCTGAGATCGCCCTGCAGGAGGCCACAGAGTCCCGGCTACGAGGCTAGACCAGCAGCTG
 GATGATCTACAGACCAAGTTTGTCTGCGCTCTGGCTGAGCTGAGATCCAGCGCACTTAAGATTGCTTACCGC
 ATTGAACGGCTGGAGTGGCAGACTCGAGAGTGGCCAATGCCCGAGGACCTGGCTGAGGCTGATGACGAGGGT
 GAGCCTGAGGAGGGAACCTCCAAGATGAAGAGGGCAGGGCAGCCAGGAGGGACCCCAAGTCCAGATGA

SEQ ID NO:4

(sense strand primer)

GCAGATCTTTTCAGAACTGTGAGGCCA

5

SEQ ID NO:5

Oligo 2 (antisense strand primer)

CCTGCCCTCTTCATCTTTGGAAGTTC

10

SEQ ID NO:6

Oligo 3 (sense strand primer)

GCCAACATCAAGAGCCTAGGTTATTC

15

SEQ ID NO:7

Oligo 4 nested gene specific oligo (sense strand primer)

GGATGATCTACAGACCAAGTTTGCTCG

20

SEQ ID NO:8

(sense strand primer)

ATGAGCCAGGACACCAAAGTGAAGAC

25

SEQ ID NO:9

Oligo 6 (antisense primer specific to human CNG2B)

GTTGATGATGCTGATCTCCCAAAG

30

SEQ ID NO:10

Oligo 7 (CNG2B-specific antisense strand primer)

GGATGATGAGGTTATACATGACTGGG

SEQ ID NO:11

Oligo 8 (nested CNG2B-specific antisense strand primer)

5 AGGCTAGCAACTTCCTGGCCTTGGAT

SEQ ID NO:12

Oligo 9 (sense strand primer)

10 GCGAAAGCTTCCACCATGAGCCAGGACACCAAAGTG

SEQ ID NO:13

Oligo 10 (antisense strand primer)

15 CATGTCTAGAATGGGGATGGGGTCACTCTGGACCT

SEQ ID NO:14

Oligo 1 (sense strand primer)

20 GCAGATCTTCAGAACTGTAAGGCCA

SEQ ID NO:15

Oligo 5 (degenerate sense strand primer)

25 ATGAGCCAGGACGGNAAGTNAARAC